



LL31 12-0016 Sequence Listings.ST25.txt  
SEQUENCE LISTING

<110> ~~INVENTOR~~ MILLIS, LLC  
PURDUE RESEARCH FOUNDATION

<120> PORCINE LEPTIN PROTEIN, ANTISENSE AND ANTIBODY

<130> LL31.12-0016

<140> US 09/932,888  
<141> 2001-08-20

<150> US 08/692,922  
<151> 1996-07-31

<160> 11

<170> PatentIn version 3.2

<210> 1  
<211> 5917  
<212> DNA  
<213> Sus scrofa

<220>  
<221> gene  
<222> (1)..(5917)  
<223> Nucleotide sequence of the porcine leptin gene. CDS Location:  
join (942..1085,3400..3753)

<220>  
<221> misc\_feature  
<222> (2943)..(2944)  
<223> n is a, c, g, or t

<220>  
<221> misc\_feature  
<222> (2983)..(2983)  
<223> n is a, c, g, or t

<220>  
<221> misc\_feature  
<222> (3037)..(3037)  
<223> n is a, c, g, or t

<400> 1  
aagctttctt ggcccctaac agcaaccaca ttatactctt actggctatt ccttggcctt 60  
caataccag cccaggggac ccctcttcca gggagccccg cttgtactcc tgagatgtca 120  
tgtccttctt gcagagctct tcctcacggc atcgggacgg cggttcaccc ttttgcctct 180  
ccggataaac tgtaagctac ttgagagcag agaacatcca ttgttcgctg tggcatccgt 240  
ggtacctagc acggcatctg acatattatc agatcttcca caaaggccag tttacgggtg 300  
aatgcccgtt gaattcaggc tcccagtggg agagcgagga agtaataaag ccggtgataa 360  
atgccgccgt ggagacacca gcgggctgcc gtgagactaa tggagaggac agtaacgtta 420  
tctctaatgc gaggggtggtt atagagtaca tttcataaca cttttaaaagc tctttcacac 480

LL31 12-0016 Sequence Listings.ST25.txt

gcattatcca atttgatcct cataaaagcc tggagatgtg tatattgtgg tggatggagg	540
gggagtcttt agcagttatg ggatatgcct gaagtcgtgc agctagtaaa tggctggatt	600
caaaccagac ctcaaaagcc tgcctgtttg ctcatgcccc ctgccccgac tgccccactct	660
gtggcccaca gcacaactca ccgtcgcttt cttgatccgt tttcttgatc cggctgtgct	720
ctccccaagg aatgcttttc attaacatat gtctaggtaa tgaattatct tgactctgag	780
gaggccatag cacatgccgt aacgcgacag ctcccttgat ctgcatctga ggctgtggct	840
ggtaacgggc gtggggaggg ggcgttcgct gagaccccag ggacacgcca tgtgtggttc	900
cctctgtttc caggccccag aagcacatcc cggaaaggaa aatgcgctgt ggaccctgt	960
gccgattcct gctggctttg gcctatctgt cctacgttga agccgtgccc atctggagag	1020
tccaggatga caccaaaacc ctcatcaaga cgattgtcac caggatcagt gacatttcac	1080
acatggtagg gaaggcctgg gagacaagggt cgaacctgtg gccagcccs ggggaggagg	1140
ggtaccggac ctcagagggt ggcggagggt ggaagggtcg gcggtggcct tgacgcctcc	1200
cccaccccc ccaaccagct gcctttgctc ctccgcttcc ctaccgcac cccccacgt	1260
ccttatcctc cttcttccca gactggaatc ctgatgcca ggactagagg aagccctaaa	1320
ggctctgtgt gcctttgcca ggtgcgcaga cccccagca tcatcccctc tggcctccat	1380
cacgtctccg gaatgttcta atctgtagga attcttctg gtgacagctg aactctgacc	1440
ctgcggacgc cccttactgc tagtcctgcc cattgagcct tttttcctat acaaccctct	1500
acatgtttgc aaacttctct caatgtcccc aggggtgttt ctctggggtc cgcaggccga	1560
gaccttcagc ctcttctcag ctgagggtccg tctttagaat tcagaagacg aggtgtgact	1620
cctcacctg ctgttccctc tctgtaaaat ctcaagcacg ttaagtccct ccgtgtctga	1680
aaccttagtt tccctcatcc agataatggg actgttactg ggaagatgtt accggaatcc	1740
agggtcttgc ctcatggagc tcaagaatga acttggcgaa cgcacaggga gccgagcaag	1800
cagaagtctt tattacagga aggagacag ctcccagcac agacacgggg agggaagagt	1860
cccccgccc attgttctac ggagggtttt atcacttaaa gacgggagta ccaatgtggg	1920
gtccagatat ccgttcttct tcccattgcc cagtttacct atatggcgcc ttgtccagga	1980
gggactctgt agagttaggg gtgctccgta agttttatgg tgcgtctgct cttctctgcc	2040
ctagacttag agtcgccact cttccattc ttctgtcac agtcaaatgc ataggtcagg	2100
ggttaattcc caccttcaca gaaatcaaat gtcctttcaa tagttaatct tccaataagc	2160
aaggcctgct tgtcttgatt agtttttaca aatcttaaac catggccatt aatcaggga	2220
gagatcgaag cccatgttcc cactactaact gcctgaatta ttagtctgcc tcaggactat	2280
cttaatagtc ttcgcaagggt tgttttgaga tttaaattaga taggagttcc tgtcgaggcg	2340
cgacggaaac agatccgact cagaacctg agacagggtt gatccctggc tttgtcagtg	2400

LL31 12-0016 Sequence Listings.ST25.txt

ggttaggatc	tggtgctgct	gtgagctgtg	gtgtaggtcg	cagaggtggc	tcggatcccc	2460
cgttgctgtg	gctgtggtgt	aggccggtgc	agacagctcc	gattagaccc	ctagcctggg	2520
aacctccatg	tgccgcgggt	accgctaaaa	aaagacaaaa	gatggaaaaa	aaaaaggtta	2580
cattagataa	agcaagtgac	tcctccacca	ccacacatat	ccctgcagaa	ccaggacaga	2640
gcatgccttc	ttgaaaagtt	ttcggttgtg	gctttgatag	caccagcct	taaaagccag	2700
cttttcaatc	tgcccagagc	agtctggaga	cttccgcata	tcctggccac	tctgagtttc	2760
taacagtggc	cttggcgagc	ctgggagcag	tccggtggcc	agaagcaggg	acagctgaga	2820
accagataga	gtcttggcac	tttcaagaga	aaaccctaag	tctccttctt	ccagccatgc	2880
aacagctgcg	catgacagat	ccagcgtgtc	ccagcctgtg	tggtgcaggg	agtgaygctg	2940
cgnyyaggyy	gygggggagc	tgaggagcga	ggcggggcat	cgnggggctg	cagcctccat	3000
ccctaagtgg	ggagacttca	tgaagagcct	gaccagnagg	gaggggcatg	tgtggaggac	3060
ctcagggcct	ggggaaggct	agaccaact	atgtgagaaa	cagacagtcg	tggctggttc	3120
tacagaagag	gcatctggag	gccattcgaa	tgcccaaagc	tgtctgggtg	aggcagggct	3180
tgctaggcag	aagacagaag	gccgtgagac	cagcttggag	gcttggcagc	cacgccagcc	3240
caaggagttc	gggcctagat	aggatttgtt	ggaaggggaa	gaggcagccg	gaggtggggg	3300
gtgggggtgg	acccgtctcc	acgcctgcag	gaaggccagg	ggctgcagag	ccaacatctc	3360
tctcgctgag	cgtctcgctc	ttcccttctt	cctgcacagc	agtctgtctc	ctccaaacag	3420
agggtcaccg	gtttggactt	catccctggg	ctccatcctg	tcctgagttt	gtccaagatg	3480
gaccagaccc	tggcgatcta	ccaacagatc	ctcaccagtc	tgcttccag	aaatgtgatc	3540
caaatatcga	atgacctgga	gaacctccgg	gaccttctcc	acctgctggc	ctcctccaag	3600
agctgcccct	tgcccagcag	ggccctggag	accttggaga	gcctgggcgg	cgtcctggaa	3660
gcctccctct	actccacgga	ggtgggtggc	ctgagcaggc	tgaggggggc	tctgcaggac	3720
atgctgcggc	agctggacct	cagccctggc	tgctgaagcc	ttgaaggcct	ctctccccac	3780
agtcggggga	agaaacctga	gcttccagga	gtctgctgga	gaagagagcc	tgtgcggacc	3840
tcctctctgc	aggtctgcgg	accatttctc	tctcgctccg	ctaagctgct	cttccaaagg	3900
cagaaaactc	caaggcacga	caccaaagac	agaaaggcct	ggttccgcgc	ccaccggaaa	3960
gggggcgccg	tccagccaac	ggtggactag	atttcggatt	ttccaccaac	gtcttccttc	4020
ctgttccatc	tccagctcac	cgcgtgcttc	agcgtgaccg	gggggatttc	agagcctttc	4080
gaccatcaag	cagggttcca	tctgagaatt	ccggggagca	cgggtgaaggc	tacaggcaca	4140
cacagctgga	tgctcccacg	caacacaagt	tggaagcatt	tctttattta	ttatgcggtg	4200
tattctgggt	ggatttgaag	caaaacacca	gcctttccag	gctctctggg	gtcagccggg	4260

LL31 12-0016 Sequence Listings.ST25.txt

gctaggggga	ggctcccagag	gtgctgtttc	cagtaccatc	catgggcctg	ctgaggccaa	4320
cccattttga	gtgacttgag	ggctctcaag	gtcgttctct	agagactggc	tttgtttcta	4380
ctgtgactga	ctttaaaact	gcagcgtgtg	cactggcatc	gcctgcgcgg	atctcgaagg	4440
gccaggttct	cttagaaaga	agaagatgaa	ctttgtcagg	ggtgtgtacg	cggagacagg	4500
aagtgtgttg	gtgggcgggg	catggatcca	gaatgtgtat	ttcttgtgtg	atggacattt	4560
gtgtgagggg	ctctctggac	aggggtgaggt	cattgtctca	tcttcgtggg	tttcatgaga	4620
gaaggagatg	attccttcac	gggggtcgtg	gggttttgcc	agccgcccgt	gcaggagtgg	4680
ggaaggggct	gaagccgaag	accgttgggg	gccgtggtga	gctctgcctt	ctccagctgc	4740
tagaggctgg	tctttctcat	cagggagtga	gggtctcgcg	ttggagacag	tgatccccag	4800
ggcgggatcc	ttgccgtggc	cctctgaatg	gtctgggtga	tcccacactg	atgtcataac	4860
aggggaagtgc	cctggtttgg	gatttgtatg	ctcacccaaa	gcaagggcct	gcttcccatc	4920
cattttggga	aggatttttt	ctccaggggg	agggtgaaag	ctctgggagg	tctgtgggct	4980
tacgagatgg	tccaagtcct	gggtcagtga	gtcccgggac	tcgtgaccgc	ctcgaggagc	5040
ccccttctcc	ctacaggtca	tgttcaatag	gtcaaacaag	gaggcatggg	tttccaccat	5100
cctgccgctg	tgatgcagcc	atcgcactac	aggaggtaga	tctgtccaag	gaaatttgaa	5160
tctcaagcaa	tcactttcaa	gactgagcat	ctatttgtct	cagccccaac	tggtgctatg	5220
ggctcagaga	agctcatcaa	ataaatatta	aatccagtc	ctgccttcag	gaccttgcac	5280
tccagatgat	aacacctccc	ccacaccccg	tctgcagagg	ctgtcatttc	accatggcaa	5340
ccgagcagct	gaaacacagt	gcggctctca	gcaggtggaa	aggctgagct	gaggagggca	5400
gtgcccgggc	ccacaggcta	accctgcttg	catttggtag	catttttact	gttcggggcg	5460
catcagcatc	tattactgag	aagccgcata	cctttgaagc	aggatagctg	agactataaa	5520
aataagaaaa	taccagagtt	cccttgtggc	acagagggct	aaggatccag	tgttgttgct	5580
gcagcagctt	gggtcacggc	tgtggcaagg	gttcgatccc	tggcctggga	actttcacat	5640
gttgcaggca	aggccaaaaa	aaaataaata	aataaaaaata	aacaaaaaaa	aacaagacca	5700
taacagcaga	ctggtggcaa	accaggacta	gaacctgggt	cctctgaccc	ctagagtcag	5760
tgtcccctga	gccagctagt	gttctctggg	gacgggaaca	gggttgggca	gggagttcag	5820
gaagtgtttg	ctggaagagc	ggagtttcca	ggctgatttt	gcaggagggtg	aggggaagtgg	5880
attgcctgga	gggaggaggc	tgttttgttt	gaagctt			5917

<210> 2  
 <211> 501  
 <212> DNA  
 <213> Sus scrofa

LL31 12-0016 Sequence Listings.ST25.txt

<220>

<221> CDS

<222> (1)..(501)

<223> Nucleotide sequence of the entire coding region of porcine leptin (i.e. signal peptide and secreted protein)

<400> 2

atg	cgc	tgt	gga	ccc	ctg	tgc	cga	ttc	ctg	ctg	gct	ttg	gcc	tat	ctg	48
Met	Arg	Cys	Gly	Pro	Leu	Cys	Arg	Phe	Leu	Leu	Ala	Leu	Ala	Tyr	Leu	
1				5					10					15		

tcc	tac	gtt	gaa	gcc	gtg	ccc	atc	tgg	aga	gtc	cag	gat	gac	acc	aaa	96
Ser	Tyr	Val	Glu	Ala	Val	Pro	Ile	Trp	Arg	Val	Gln	Asp	Asp	Thr	Lys	
			20					25					30			

acc	ctc	atc	aag	acg	att	gtc	acc	agg	atc	agt	gac	att	tca	cac	atg	144
Thr	Leu	Ile	Lys	Thr	Ile	Val	Thr	Arg	Ile	Ser	Asp	Ile	Ser	His	Met	
		35					40					45				

cag	tct	gtc	tcc	tcc	aaa	cag	agg	gtc	acc	ggg	ttg	gac	ttc	atc	cct	192
Gln	Ser	Val	Ser	Ser	Lys	Gln	Arg	Val	Thr	Gly	Leu	Asp	Phe	Ile	Pro	
	50					55					60					

ggg	ctc	cat	cct	gtc	ctg	agt	ttg	tcc	aag	atg	gac	cag	acc	ctg	gcg	240
Gly	Leu	His	Pro	Val	Leu	Ser	Leu	Ser	Lys	Met	Asp	Gln	Thr	Leu	Ala	
65				70					75					80		

atc	tac	caa	cag	atc	ctc	acc	agt	ctg	cct	tcc	aga	aat	gtg	atc	caa	288
Ile	Tyr	Gln	Gln	Ile	Leu	Thr	Ser	Leu	Pro	Ser	Arg	Asn	Val	Ile	Gln	
				85					90					95		

ata	tcg	aat	gac	ctg	gag	aac	ctc	cgg	gac	ctt	ctc	cac	ctg	ctg	gcc	336
Ile	Ser	Asn	Asp	Leu	Glu	Asn	Leu	Arg	Asp	Leu	Leu	His	Leu	Leu	Ala	
			100					105					110			

tcc	tcc	aag	agc	tgc	ccc	ttg	ccc	agc	agg	gcc	ctg	gag	acc	ttg	gag	384
Ser	Ser	Lys	Ser	Cys	Pro	Leu	Pro	Ser	Arg	Ala	Leu	Glu	Thr	Leu	Glu	
		115					120					125				

agc	ctg	ggc	ggc	gtc	ctg	gaa	gcc	tcc	ctc	tac	tcc	acg	gag	gtg	gtg	432
Ser	Leu	Gly	Gly	Val	Leu	Glu	Ala	Ser	Leu	Tyr	Ser	Thr	Glu	Val	Val	
	130					135					140					

gcc	ctg	agc	agg	ctg	cag	ggg	gct	ctg	cag	gac	atg	ctg	cgg	cag	ctg	480
Ala	Leu	Ser	Arg	Leu	Gln	Gly	Ala	Leu	Gln	Asp	Met	Leu	Arg	Gln	Leu	
145					150					155					160	

gac	ctc	agc	cct	ggc	tgc	tga										501
Asp	Leu	Ser	Pro	Gly	Cys											
				165												

<210> 3

<211> 166

<212> PRT

<213> Sus scrofa

<400> 3

Met	Arg	Cys	Gly	Pro	Leu	Cys	Arg	Phe	Leu	Leu	Ala	Leu	Ala	Tyr	Leu
1				5					10					15	

LL31 12-0016 Sequence Listings.ST25.txt

Ser Tyr Val Glu Ala Val Pro Ile Trp Arg Val Gln Asp Asp Thr Lys  
20 25 30

Thr Leu Ile Lys Thr Ile Val Thr Arg Ile Ser Asp Ile Ser His Met  
35 40 45

Gln Ser Val Ser Ser Lys Gln Arg Val Thr Gly Leu Asp Phe Ile Pro  
50 55 60

Gly Leu His Pro Val Leu Ser Leu Ser Lys Met Asp Gln Thr Leu Ala  
65 70 75 80

Ile Tyr Gln Gln Ile Leu Thr Ser Leu Pro Ser Arg Asn Val Ile Gln  
85 90 95

Ile Ser Asn Asp Leu Glu Asn Leu Arg Asp Leu Leu His Leu Leu Ala  
100 105 110

Ser Ser Lys Ser Cys Pro Leu Pro Ser Arg Ala Leu Glu Thr Leu Glu  
115 120 125

Ser Leu Gly Gly Val Leu Glu Ala Ser Leu Tyr Ser Thr Glu Val Val  
130 135 140

Ala Leu Ser Arg Leu Gln Gly Ala Leu Gln Asp Met Leu Arg Gln Leu  
145 150 155 160

Asp Leu Ser Pro Gly Cys  
165

<210> 4  
<211> 166  
<212> PRT  
<213> Sus scrofa

<220>  
<221> Protein  
<222> (1)..(166)  
<223> Amino acid sequence of the entire coding region of porcine leptin  
(i.e. signal peptide and secreted protein)

<220>  
<221> Protein  
<222> (1)..(166)  
<223> Amino acid translation of the entire coding region of porcine  
leptin (i.e. signal peptide and secreted protein)

<400> 4

Met Arg Cys Gly Pro Leu Cys Arg Phe Leu Leu Ala Leu Ala Tyr Leu  
1 5 10 15

LL31 12-0016 Sequence Listings.ST25.txt

Ser Tyr Val Glu Ala Val Pro Ile Trp Arg Val Gln Asp Asp Thr Lys  
20 25 30

Thr Leu Ile Lys Thr Ile Val Thr Arg Ile Ser Asp Ile Ser His Met  
35 40 45

Gln Ser Val Ser Ser Lys Gln Arg Val Thr Gly Leu Asp Phe Ile Pro  
50 55 60

Gly Leu His Pro Val Leu Ser Leu Ser Lys Met Asp Gln Thr Leu Ala  
65 70 75 80

Ile Tyr Gln Gln Ile Leu Thr Ser Leu Pro Ser Arg Asn Val Ile Gln  
85 90 95

Ile Ser Asn Asp Leu Glu Asn Leu Arg Asp Leu Leu His Leu Leu Ala  
100 105 110

Ser Ser Lys Ser Cys Pro Leu Pro Ser Arg Ala Leu Glu Thr Leu Glu  
115 120 125

Ser Leu Gly Gly Val Leu Glu Ala Ser Leu Tyr Ser Thr Glu Val Val  
130 135 140

Ala Leu Ser Arg Leu Gln Gly Ala Leu Gln Asp Met Leu Arg Gln Leu  
145 150 155 160

Asp Leu Ser Pro Gly Cys  
165

<210> 5  
<211> 435  
<212> DNA  
<213> Sus scrofa

<220>  
<221> CDS  
<222> (1)..(435)  
<223> Nucleotide sequence of the coding region of porcine leptin  
corresponding to the secreted porcine leptin protein

<400> 5  
gtg ccc atc tgg aga gtc cag gat gac acc aaa acc ctc atc aag acg 48  
Val Pro Ile Trp Arg Val Gln Asp Asp Thr Lys Thr Leu Ile Lys Thr  
1 5 10 15

att gtc acc agg atc agt gac att tca cac atg cag tct gtc tcc tcc 96  
Ile Val Thr Arg Ile Ser Asp Ile Ser His Met Gln Ser Val Ser Ser  
20 25 30

aaa cag agg gtc acc ggt ttg gac ttc atc cct ggg ctc cat cct gtc 144

LL31 12-0016 Sequence Listings.ST25.txt

Lys	Gln	Arg	Val	Thr	Gly	Leu	Asp	Phe	Ile	Pro	Gly	Leu	His	Pro	Val		
		35					40					45					
ctg	agt	ttg	tcc	aag	atg	gac	cag	acc	ctg	gcg	atc	tac	caa	cag	atc		192
Leu	Ser	Leu	Ser	Lys	Met	Asp	Gln	Thr	Leu	Ala	Ile	Tyr	Gln	Gln	Ile		
	50					55					60						
ctc	acc	agt	ctg	cct	tcc	aga	aat	gtg	atc	caa	ata	tcg	aat	gac	ctg		240
Leu	Thr	Ser	Leu	Pro	Ser	Arg	Asn	Val	Ile	Gln	Ile	Ser	Asn	Asp	Leu		
	65				70					75					80		
gag	aac	ctc	cgg	gac	ctt	ctc	cac	ctg	ctg	gcc	tcc	tcc	aag	agc	tgc		288
Glu	Asn	Leu	Arg	Asp	Leu	Leu	His	Leu	Leu	Ala	Ser	Ser	Lys	Ser	Cys		
				85					90					95			
ccc	ttg	ccc	agc	agg	gcc	ctg	gag	acc	ttg	gag	agc	ctg	ggc	ggc	gtc		336
Pro	Leu	Pro	Ser	Arg	Ala	Leu	Glu	Thr	Leu	Glu	Ser	Leu	Gly	Gly	Val		
			100					105					110				
ctg	gaa	gcc	tcc	ctc	tac	tcc	acg	gag	gtg	gtg	gcc	ctg	agc	agg	ctg		384
Leu	Glu	Ala	Ser	Leu	Tyr	Ser	Thr	Glu	Val	Val	Ala	Leu	Ser	Arg	Leu		
		115					120					125					
cag	ggg	gct	ctg	cag	gac	atg	ctg	cgg	cac	gtg	gac	ctc	agc	cct	ggc		432
Gln	Gly	Ala	Leu	Gln	Asp	Met	Leu	Arg	His	Val	Asp	Leu	Ser	Pro	Gly		
	130					135					140						
tgc																	435
Cys																	
145																	

<210> 6  
 <211> 145  
 <212> PRT  
 <213> Sus scrofa  
 <400> 6

Val	Pro	Ile	Trp	Arg	Val	Gln	Asp	Asp	Thr	Lys	Thr	Leu	Ile	Lys	Thr		
1				5					10					15			
Ile	Val	Thr	Arg	Ile	Ser	Asp	Ile	Ser	His	Met	Gln	Ser	Val	Ser	Ser		
			20					25					30				
Lys	Gln	Arg	Val	Thr	Gly	Leu	Asp	Phe	Ile	Pro	Gly	Leu	His	Pro	Val		
		35					40					45					
Leu	Ser	Leu	Ser	Lys	Met	Asp	Gln	Thr	Leu	Ala	Ile	Tyr	Gln	Gln	Ile		
	50					55					60						
Leu	Thr	Ser	Leu	Pro	Ser	Arg	Asn	Val	Ile	Gln	Ile	Ser	Asn	Asp	Leu		
	65				70					75					80		
Glu	Asn	Leu	Arg	Asp	Leu	Leu	His	Leu	Leu	Ala	Ser	Ser	Lys	Ser	Cys		
				85					90					95			



LL31 12-0016 Sequence Listings.ST25.txt

Pro Leu Pro Ser Arg Ala Leu Glu Thr Leu Glu Ser Leu Gly Gly Val  
100 105 110

Leu Glu Ala Ser Leu Tyr Ser Thr Glu Val Val Ala Leu Ser Arg Leu  
115 120 125

Gln Gly Ala Leu Gln Asp Met Leu Arg His Val Asp Leu Ser Pro Gly  
130 135 140

Cys  
145

<210> 7  
<211> 145  
<212> PRT  
<213> Sus scrofa

<220>  
<221> Protein  
<222> (1)..(145)  
<223> Amino acid translation of porcine leptin cDNA corresponding to  
the secreted porcine leptin protein

<400> 7

Val Pro Ile Trp Arg Val Gln Asp Asp Thr Lys Thr Leu Ile Lys Thr  
1 5 10 15

Ile Val Thr Arg Ile Ser Asp Ile Ser His Met Gln Ser Val Ser Ser  
20 25 30

Lys Gln Arg Val Thr Gly Leu Asp Phe Ile Pro Gly Leu His Pro Val  
35 40 45

Leu Ser Leu Ser Lys Met Asp Gln Thr Leu Ala Ile Tyr Gln Gln Ile  
50 55 60

Leu Thr Ser Leu Pro Ser Arg Asn Val Ile Gln Ile Ser Asn Asp Leu  
65 70 75 80

Glu Asn Leu Arg Asp Leu Leu His Leu Leu Ala Ser Ser Lys Ser Cys  
85 90 95

Pro Leu Pro Ser Arg Ala Leu Glu Thr Leu Glu Ser Leu Gly Gly Val  
100 105 110

Leu Glu Ala Ser Leu Tyr Ser Thr Glu Val Val Ala Leu Ser Arg Leu  
115 120 125

Gln Gly Ala Leu Gln Asp Met Leu Arg His Val Asp Leu Ser Pro Gly  
Page 9

130

Cys  
145

<210> 8  
<211> 504  
<212> DNA  
<213> Homo sapiens

<220>  
<221> DNA  
<222> (1)..(504)  
<223> Nucleotide sequence of human leptin protein

<400> 8  
atgcattggg gaaccctgtg cggattcttg tggctttggc cctatctttt ctatgtccaa 60  
gctgtgcccc tccaaaaagt ccaagatgac accaaaaccc tcatcaagac aattgtcacc 120  
aggatcaatg acatttcaca cacgcagtca gtctcctcca aacagaaagt caccggtttg 180  
gacttcattc ctgggctcca ccccatcctg accttatcca agatggacca gacactggca 240  
gtctaccaac agatcctcac cagtatgcct tccagaaacg tgatccaaat atccaacgac 300  
ctggagaacc tccgggatct tcttcacgtg ctggccttct ctaagagctg ccacttgccc 360  
tggggcagtg gcctggagac cttggacagc ctgggggggtg tcctggaagc ttcaggctac 420  
tccacagagg tgggtggcct gagcaggctg caggggtctc tgcaggacat gctgtggcag 480  
ctggacctca gccctgggtg ctga 504

<210> 9  
<211> 504  
<212> DNA  
<213> Artificial

<220>  
<223> Murine Leptin

<220>  
<221> DNA  
<222> (1)..(504)  
<223> Nucleotide sequence of murine leptin protein

<400> 9  
atgtgtgga gaccctgtg tcggttcctg tggctttggt cctatctgtc ttatgttcaa 60  
gcagtgccta tccagaaagt ccaggatgac accaaaaccc tcatcaagac cattgtcacc 120  
aggatcaatg acatttcaca cacgcagtgc gtatccgcca agcagagggt cactggcttg 180  
gacttcattc ctgggcttca cccattctg agtttgtcca agatggacca gactctggca 240  
gtctatccac aggtcctcac cagcctgcct tcccaaatg tgctgcagat agccaatgac 300

LL31 12-0016 Sequence Listings.ST25.txt

ctggagaatc tccgagacct cctccatctg ctggccttct ccaagagctg ctccctgcct	360
cagaccagtg gcctgcagaa gccagagagc ctggatggcg tcctggaagc ctcactctac	420
tccacagagg tgggtggcttt gagcaggctg cagggctctc tgcaggacat tcttcaacag	480
ttggatgtta gccctgaatg ctga	504

<210> 10  
 <211> 36  
 <212> DNA  
 <213> Artificial

<220>  
 <223> Primer

<400> 10 ggatccggtc tcaggccgtg ccyatccara aagtcc	36
---	----

<210> 11  
 <211> 30  
 <212> DNA  
 <213> Artificial

<220>  
 <223> Primer

<400> 11 gaattcagcg ctgcayycag ggcttrasrtc	30
---	----